

WHAT IS CLAIMED IS:

1. A ball grid array (BGA) package having a plurality of external connection contacts, comprising:

a first device having a plurality of electrical connections connected to a first set
5 of the external electrical connection contacts; and

a second device having a plurality of electrical connections connected to a second set of the external connection contacts;

wherein the first and second sets of the external electrical connections are segregated in two sections which are electrically isolated from each other.

10 2. The package of claim 1, wherein the two sections are separated by spacing gaps in accordance with a predetermined standard.

3. The package of claim 2, wherein the standard is according to an ANSI/IPC-2221 standard.

4. The package of claim 1, further comprising:

15 a plurality of layers, including a signal layer, a power layer, a ground layer and a bottom layer;

wherein each of the layers includes two sets of electrical connections that are segregated in two sections which are electrically isolated from each other, and the two sets of electrical connections are respectively connected to the first and second devices.

5 5. The package of claim 4, wherein the standard is according to an ANSI/IPC-2221 standard.

6. The package of claim 1, wherein the first and second devices are semiconductor integrated circuit (IC) devices.

10 7. The package of claim 6, wherein the IC devices are communications devices.

8. A packaging method, comprising:

15 placing a plurality of devices respectively in a plurality of sections on a substrate of a single ball grid array package, each device having a plurality of electrical connections for connecting to a set of external electrical connection contacts on the package; and

 creating spacing gaps among a plurality sets of external electrical connection contacts on the package to maintain electrical isolation among the plurality sets of the external electrical connections;

wherein the spacing gaps are maintained in accordance with a predetermined standard.

9. The method of claim 8, wherein the standard is an ANSI/IPC-2221 standard.

5 10. The method of claim 8, wherein the creating step includes removing pre-selected external electrical connection contacts.

11. The method of claim 8,

wherein the package includes a plurality of layers including a signal layer, a power layer, a ground layer and a bottom layer;

10 wherein each of the layers includes a plurality sets of electrical connections that are segregated in a plurality of sections which are electrically isolated from one another, and the plurality sets of electrical connections are respectively for connecting to the plurality of devices.

12. The method of claim 11, wherein the standard is an ANSI/IPC-2221
15 standard.

13. A ball grid array package, comprising:

a plurality of layers, including a signal layer, a power layer, a ground layer and a bottom layer;

wherein each of the layers includes a plurality sets of electrical connections that are segregated in a plurality of sections which are electrically isolated from one another, the plurality sets of electrical connections are for respectively connecting to a plurality of devices to be mounted within the package.

5 14. The package of claim 13, wherein the plurality of sections are segregated in accordance with a predetermined standard.

10 15. The package of claim 14, wherein the plurality of sections are segregated in accordance with an ANSI/IPC-2221 standard.

15 16. The package of claim 13, wherein the first and second devices are semiconductor integrated circuit (IC) devices.

20 17. The package of claim 16, wherein the IC devices are communications devices.

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